IN THE CLAIMS

As shown below, please cancel claims 1-27, and add new claims 28-35.

1. - 27. (Canceled)

28. (New) A method for generating synchronization bursts for OFDM

transmission systems, comprising the following steps:

- mapping the symbols of a predefined symbol sequence according to a predefined mapping

scheme on subcarriers S of the OFDM system, wherein the symbols of the predefined symbol

sequence represent subcarriers of the OFDM system with non-zero-amplitude, and

- generating a synchronization burst by Inverse Fourier Transforming the subcarriers S of the

OFDM system mapped with the symbols of said predefined symbol sequence,

characterized in that

the predefined symbol sequence is set such that the envelope fluctuation of the time domain

signal of the synchronization burst is minimized and the symbols of the predefined symbols

sequence can be expressed as

A -A A -A -A A -A -A A A A A

A being a complex value.

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29. (New) A method for synchronizing wireless OFDM systems,

characterized by the steps of

- generating a synchronization burst according to a method according to claim 28, and

- transmitting the synchronization burst.

30. (New) A method according to claim 29,

characterized in that

the time domain signal of the synchronization burst is precomputed and stored in a memory.

31. (New) An OFDM transmitter, comprising:

- a unit for mapping the symbols of a predefined symbol sequence according to a predefined

mapping scheme on subcarriers of the OFDM system, wherein the symbols of the predefined

symbol sequence represent subcarriers of the OFDM system with non-zero-amplitude, and

- a unit for generating a synchronization burst by Inverse Fourier Transforming the subcarriers

of the OFDM system mapped with the symbols of said predefined symbol sequence,

characterized in that

the mapping unit is designed to modulate the subcarriers such that the envelope fluctuation of

the time domain signal of the synchronization burst is minimized by using the following

predefined symbol sequence:

A -A A -A -A A -A -A A A A A

A being a complex value.

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32. (New) An OFDM transmitter according to claim 31,

characterized by

a time extension unit copying the burst part to achieve a periodic nature of the time domain

signal.

33. (New) An OFDM transmitter according to claim 31,

characterized by

a processing unit for precomputing the time domain signal of the synchronization burst

and a memory for storing the precomputed time domain signal of the synchronization

burst.

34. (New) A mobile communications device,

comprising a transmitter according to claim 31.

35. (New) A synchronization burst signal for synchronizing OFDM systems generated by a

method according to claim 28.

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